

50 dB WR-90 Waveguide Dual Directional Crossguide Coupler with UG-39/U and SMA Female Coupling Ports from 8.2 GHz to 12.5 GHz in Brass



FMWCP1094S-50

Features

- Four Port Dual Directional Crossguide Waveguide Coupler
- Bi-Directional
- 50±1.5 dB Nominal Coupling Level
- Integrated SMA Female Connector for the coupled ports
- 8.2 GHz to 12.5 GHz Frequency Range
- Low VSWR < 1.25:1

Applications

- Test Benches
- Radar
- Satellite
- Microwave Radio
- Attenuation Measurements
- Power Measurements
- Source Leveling

Description

The FMWCP1094S-50 is a 50 dB WR-90 four port dual directional crossguide Coupler with integrated SMA Female connectors for the coupled ports. This coupler can be mounted directly into the waveguide signal path, connected via coax to allow signal sampling /monitoring. The coupler has a typical VSWR of 1.1:1 and are made of Brass with UG-39/U flanges. The FMWCP1094S-50 is part of a family of cross guide couplers offered by Fairview Microwave with coupling values ranging from 20 to 50 dB.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	8.2		12.5	GHz
Impedance		50		Ohms
Coupler				
Nominal Coupling Level		50		dB
Coupling Accuracy		±1.5		dB
Directivity	18			dB
Insertion Loss			0.1	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.25:1	
Input Power (CW)			600	Watts
Input Power, Peak			200	kWatts

Mechanical Specifications

Size

Length	3.86 in [98.04 mm]
Width	3.94 in [100.08 mm]
Height	1.63 in [41.4 mm]
Weight	1 lbs [453.59 g]

Interface

Waveguide Size	WR-90
Flange Type	UG-39/U
Flange Material and Plating	Brass Copper, Passivated Stainless Steel
RF Connector Type	SMA Female

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Coupler with UG-39/U and SMA Female Coupling
Ports from 8.2 GHz to 12.5 GHz in Brass



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Coupler Body Material and Plating
Coupler Body Plating Specification

Brass Copper, Passivated Stainless Steel
Anticorrosion grey paint

Environmental Specifications

Temperature

Operating Range
Storage Range

-40 to +70 deg C
-55 to +85 deg C

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

50 dB WR-90 Waveguide Dual Directional Crossguide Coupler with UG-39/U and SMA Female Coupling Ports from 8.2 GHz to 12.5 GHz in Brass from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [50 dB WR-90 Waveguide Dual Directional Crossguide Coupler with UG-39/U and SMA Female Coupling Ports from 8.2 GHz to 12.5 GHz in Brass FMWCP1094S-50](#)

URL: <https://www.fairviewmicrowave.com/50db-wr90-waveguide-dual-crossguide-coupler-ug-39-u-12.5ghz-fmwcp1094s-50-p.aspx>

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FMWCP1094S-50 CAD Drawing

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